

Application No. 10/840,178
Response to Office Action dated May 18, 2006
Paper dated November 15, 2006, 2006
Attorney Docket No. 2034-044072

REMARKS

Claims 20-27 and 29-47 were pending in this application. Claims 32-35 have been canceled. Claims 39-47 have been withdrawn. Claim 22 has been amended. New claims 48 and 49 have been added. Support for the new language contained in claim 22 is found in claim 20. Support for the language contained in claims 48 and 49 is found in original claims 32-35 and at least at page 10, paragraph [0039], page 11, paragraph [0042] and page 12, paragraph [0042] of the specification. No new matter has been added. In view of the foregoing amendments and following remarks, Applicants believe that the rejections should be withdrawn and that all pending claims 20-27, 29-31 and 36-38, 48 and 49 are in condition for allowance.

Allowable Subject Matter

The Examiner indicates that claims 32-35 would be allowable if rewritten in independent form including all of the limitations of base claim 20 and any intervening claims. New independent claim 48 includes all of the limitations of claim 20 as well as the limitations contained in claims 32-35. New claim 49 also includes all of the limitations of claim 20 and of claims 32-35, as well as an additional limitation, namely, a receptor that binds a material, such that upon binding the material, spectral features of the receptor are altered. Applicants submit, therefore, that new claims 48 and 49 are deemed allowable.

Claim Objections

Claims 22-25 are objected to under 37 C.F.R. § 1.75(c) as purportedly being of improper dependent form. The Examiner asserts that the claims do not include the limitation recited in claim 20, namely having “at least one pore allowing fluid communication

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between the interior and exterior of the sensor compartment.” Applicants disagree with the Examiner’s assertion of lack of antecedent basis for the reasons previously made of record. However, to expedite allowance of the case, claim 22 has been amended to expressly recite the above-quoted limitation recited in claim 20.

35 U.S.C. § 103 Rejections

Claims 20-27, 29, 30, 36, 37 and 38 stand rejected under 35 U.S.C. § 103(a) for asserted obviousness over Dumont et al. (U.S. Patent No. 6,315,767) in view of Di Giuseppi et al. (U.S. Patent No. 5,164,796). Claims 20-26, 29, 31 and 36-38 stand rejected under 35 U.S.C. § 103(a) for asserted obviousness over Dumont et al. in view of Walt et al. (U.S. Patent No. 6,210,910). The reasons for these rejections are the same as made of record in the previous Office Action dated November 28, 2005.

The present invention as claimed in independent claim 20 is directed to a sensor device comprising a biosensor including a receptor bound on a solid substrate, a sensor compartment having an interior and an exterior and enclosing the biosensor, and a separation barrier forming at least a portion of the sensor compartment. The sensor compartment has a surface allowing external viewing of the biosensor. The separation barrier is selected from the group consisting of a fibril membrane, a microporous membrane and a capillary-pore membrane. The separation barrier also has at least one pore allowing fluid communication between the interior and exterior of the sensor compartment.

In contrast to the claimed invention, Dumont et al. disclose a device with a membrane having a plurality of pores filled with an erodible substance responsive to selected characteristics of blood in a bag containing the device, in which the erodible substance is responsive to, and erodible upon exposure to, certain environmental conditions or a selected

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characteristic of a blood product contained within the inner volume of the bag, such as a pH level or decreased glucose level (see column 4, lines 12-16). Dumont et al. further disclose that the erodible substance contained within the pores begins to dissolve when the pH of the stored blood product drops to 6.4 and is completely eroded away when the pH of the blood product reaches 6.2 (see column 4, lines 24-31). Applicants point out that Dumont et al. fail to teach or suggest that the membrane may be composed of a material responsive to a selective characteristic of the blood product, such that the unfilled pores themselves are responsive to the selected characteristic, having a relatively smaller pore size at a first value of the selected characteristic and a relatively larger pore size at a second value of the selected characteristic (see column 2, line 65 to column 3, line 4). Even in the aforementioned contemplated membrane configuration taught by Dumont et al., the membrane is required to be actively responsive to a selected characteristic of blood in a blood bag.

Furthermore, Dumont et al. fail to teach or disclose a separation barrier forming a portion of the sensor compartment, wherein the separation barrier is selected from the group consisting of a fibril membrane, a microporous membrane and a capillary-pore membrane, as required by independent claim 20. Additionally, Dumont et al. fail to teach or suggest a biosensor comprising a receptor bound on a solid substrate, as also required by independent claim 20.

With respect to Di Giuseppi et al., this reference discloses an instrument for monitoring the color change of an indicator element sealed within a sterile vessel, and is provided by the Examiner as a teaching of the use of fluorescent-receptor complex pH indicators bound to a solid support for fluorescent detection of changes in pH. Applicants

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point out that Di Giuseppi et al. fail to teach or suggest a separation barrier selected from the group consisting of a fibril membrane, a microporous membrane and a capillary-pore membrane as required by independent claim 20. Additionally, Di Giuseppi et al. fail to teach or suggest a biosensor comprising a receptor bound on a solid substrate, as also required by independent claim 20. Thus, the disclosure of Di Giuseppi et al. does not cure the deficiencies of Dumont et al. Applicants submit, therefore, that neither Dumont et al. nor Di Giuseppi et al., either alone or in combination, teaches or suggests the subject matter of independent claim 20. Claims 21-27, 29, 30, 36, 37 and 38 depend from and add further limitations to independent claim 20, and thus are believed to be patentable over the cited prior art for the reasons discussed above in connection with independent claim 20.

With respect to Walt et al., this reference discloses a biosensor array that utilizes an optically interrogatable encoding scheme for determining the identity and location of different cell types, and is provided by the Examiner as a teaching of the use of fluorochrome-receptor complexes for determining cell viability. As such, the Walt et al. disclosure does not cure the deficiencies of the Dumont et al. patent. Applicants submit, therefore, that neither Dumont et al. nor Walt et al., either alone or in combination, teaches or suggests the subject matter of independent claim 20. Claims 21-26, 29, 31 and 36-38 depend from and add further limitations to independent claim 20, and thus are believed to be patentable over the cited prior art for the reasons discussed above in connection with independent claim 20.

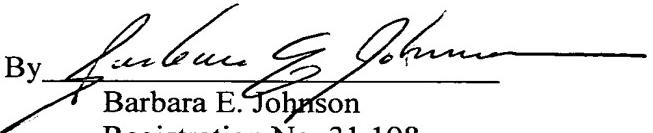
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CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that all pending claims 20-27, 29-31, 36-38, 48 and 49 in the present application are distinguishable from the cited prior art. Accordingly, reconsideration and withdrawal of the rejections and an early Notice of Allowance are respectfully requested.

Respectfully submitted,

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